



#### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:

Igor BARGATIN et al.

Title:

**DETECTION OF RESONATOR MOTION** 

USING PIEZORESISTIVE SIGNAL

**DOWNMIXING** 

Appl. No.:

10/590,485

Int'l Filing Date:

2/24/2005

371(c) Date:

Examiner:

Unassigned

Art Unit:

Unassigned

Conf. No.:

9701

#### RENEWED PETITION UNDER 37 C.F.R. § 1.47(a)

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Sir:

In response to the Petition Decision mailed on January 11, 2008, in the aboveidentified application, dismissing the previously filed petition, favorable reconsideration is requested in view of the following and attached documents.

The Decision stated that applicants did not meet their burden of showing that Darron K. Young cannot be located because no evidence showing an attempt to locate Mr. Young using the internet and telephone directory search was presented. Internet and telephone directory searches were indeed performed prior to filing the Petition on November 26, 2007, however, evidence of these searches was not included in the Petition because no satisfactory results were achieved. The previous attempts, and additional attempts made since receiving the Decision, are documented in the attached statement of Karen Walker in support of the present renewed petition.

The Decision also stated that the declaration signed by Jessica Arlett contains a non-initialed, non-dated alteration. 37 CFR 1.52(c)(1) states, in part, that "Any inerlineation, erasure, cancellation or other alteration....should be dated and initialed or <u>signed</u> by the applicant <u>on the same sheet of paper</u>." It is respectfully submitted that Ms. Arlett made the alteration to the Declaration, correcting her residence to South Pasadena, California, and then <u>signed</u> and dated the Declaration in the spaces provided immediately below. Therefore, the requirement for an alteration to be signed on the same sheet of paper has been met, and the objection to Ms. Arlett's signed Declaration should be withdrawn.

Finally, a signed return receipt of the registered letter (and enclosures) mailed by registered mail to Mr. Young's last known address of 430 Gerona Avenue, San Gabriel, CA, 91775, on November 16, 2007, and discussed in item f. of the previous petition (Exhibit E of previous petition), is attached hereto as Exhibit 1. The receipt is signed, however, the signature is not clearly legible, so it is unclear who signed the return receipt.

In view of the evidence submitted in the previous petition and the present renewed petition, it is clear that Mr. Young can not be reached, or alternatively, that if the registered letter and enclosures were received by Mr. Young, that he is refusing to sign the Declaration for the present application.

In view of the originally filed Petition and supporting documents filed therewith, and the present renewed petition and supporting documents, it is respectfully requested that the present application be granted status under 37 C.F.R. § 1.47(a) and placed in line for examination.

If there are any questions regarding the above, please contact the undersigned.

Respectfully submitted,

Date <u>January 18, 2008</u>

FOLEY & LARDNER LLP Customer Number: 22428

Telephone:

(202) 945-6090

Facsimile:

(202) 672-5399

Leon Radomsky

Attorney for Applicant

Registration No. 43,445



<ul> <li>Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.</li> <li>Print your name and address on the reverse</li> </ul>	A. Signature  X Agent  Addresse		
so that we can return the card to you.  • Attach this card to the back of the mailpiece, or on the front if space permits.	B. Received by (Printed Name) C. Date of Deliver		
1. Article Addressed to:	D. Is delivery address different from Item 1?  Yes  If YES, enter delivery address below:  No		
Darven K. Young			
430 Gercha tive.	3. Service Type		
Darren K. Young 430 Gerena Ave. San Gabriel, C.A. 91776	☐ Certified Mail ☐ Express Mail ☐ Registered ☐ Return Receipt for Merchandis ☐ Insured Mail ☐ C.O.D.		
	4. Restricted Delivery? (Extra Fee) ☐ Yes		
2. Article Number (Transfer from service label) 7005	1390 0005 6265 3823		



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Appl. No.:

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Unassigned

Art Unit:

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Conf. No.:

9701

## STATEMENT OF KAREN WALKER IN SUPPORT OF RENEWED PETITION UNDER 37 CFR 1.47(A)

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Sir:

- I, Karen A. Walker, hereby declare the following:
- I am a legal assistant employed by Foley & Lardner LLP, 3000 K Street, NW, Suite 500, Washington, DC 20007. I provide support to Leon Radomsky, the attorney of record in the above-identified application.
- On November 20, 2007, I performed an internet search attempting to locate Darron K. Young, an inventor of the above-identified U.S. Patent Application. I searched <a href="https://www.zabasearch.com">www.zabasearch.com</a> for Darron K. Young in all of the United States. Of the three results for Darron K. Young, two included telephone numbers, (323) 255-5508 and (323) 255-8283. On November 20, 2007, I called (323) 255-5508 and the number rang with no answer. On November 20, 2007, I called (323) 255-8283 and left a message

on an answering machine requesting that Darron Young return my call. I did not print out the results of my internet search on November 20, 2007, as the results were not useful.

- On January 17, 2008, I again searched www.zabasearch.com for Darron K. Young in all of the United States (see Exhibit A). On January 17, 2008, I called (323) 255-5508 and the number rang with no answer. On January 17, 2008, I called (323) 255-8283, and the phone was answered by Mr. Sanchez, who told me I had the wrong number.
- 4) On January 17, 2008, I searched www.whitepages.com for Darron Young (see Exhibit B). The sole result lists Darron Young's last known address of 430 Gerona Avenue, San Gabriel, CA 91775-2938, and no telephone number.
- On January 17, 2008, I google searched Darron K. Young (see Exhibit C). The first result is a PCT Publication listing Darron K. Young as an inventor, with an address care of California Institute of Technology (we know he is no longer with our client, California Institute of Technology). The second result lists Darron K. Young and a link to a page outlining the subject of Session A26 from a conference Mr. Young was involved with in 2000 (see Exhibit D), and lists his association with the Center for Spintronics and Quantum Computation, Quantum Institute, University of California, Santa Barbara. The website for this group does not list Darron K. Young as a current group member (see Exhibit E).
- I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under § 1001 of Title 18 of the United States Code, and that such willful, false statements may jeopardize the validity of the application or any patent issued thereon.

Date

Search by Phone Number Search by Social Security Number Complete Background Check

Search A Full Name:

**All States** Darron K. Young Advanced Search ZabaSearch : Yellow Pages : White Pages : : Public Records **elgoo** 

Public Information Results Summary: 3 Free DARRON K YOUNG Listings Found / 45 Free DARRO DARRON K. YOUNG - Background Check, 20 Year History Premium Listing

www.intelius.com Comprehensive Report. Criminal Records. Latest Contact Information.

Find DARRON K. YOUNG

Premium Listing

www.intelius.com Get Current Phone and Address.

**DARRON K YOUNG - 3 Free Listings** 

rings, no answer Leave a message for Darron Young Check messages E-mail This Page ZabaAlert Check messages for: Young - Darron - Darron K. Young ZabaSearch Founder

DARRON K YOUNG Born 1974 More Info about DARRON K YOUNG

1542 VIA DEL REY Map It Recorded: 10/16/2003 Check White Page Listings Check Yellow Pages

SOUTH PASADENA, CA 91030 (323) 255-5508 Check messages for Darron Young Leave a message ( Jaluelii (

Google Darron K Young DARRON K YOUNG Background Check

DARRON K YOUNG Born 1974 More Info about DARRON K YOUNG

1542 VIA DEL REY Map It Recorded: 03/12/2002 Check White Page Listings Check Yellow Pages

wrong number wrong number sanchez answered illalos SOUTH PASADENA, CA 91030 (323) 255-8238 Check messages for Darron Young Leave a message

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1600 DEL REY VIIA Map It Recorded: 03/12/2002 Check White Page Listings Check Yellow Pages

SOUTH PASADENA, CA 91030

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18175 22ND AVE Map It 

OPA LOCKA, FL 33056 Check messages for Leave a message

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DARRON YOUNG More Info about DARRON YOUNG

18175 22ND AVE Map It Recorded: 11/01/2005 Check White Page Listings Check Yellow Pages

**OPA LOCKA, FL** 33056 (305) 474-8023 Check messages for Leave a message

Google Darron Young DARRON YOUNG Background Check

http://www.zabasearch.com/query1 zaba.php?sname=Darron%20K.%20Young&state=A...

1/17/2008

#### DARRON YOUNG Born Nov 1966 More Info about DARRON YOUNG

316 ALAPAHA ST Map It Recorded: 04/01/2005 Check White Page Listings Check Yellow Pages

FITZGERALD, GA 31750 (229) 424-9089 Check messages for Leave a message

Google Darron Young DARRON YOUNG Background Check

#### DARRON YOUNG More Info about DARRON YOUNG

410 CYPRESS ST Map It Recorded: Unknown Check White Page Listings Check Yellow Pages
FITZGERALD, GA 31750 (229) 424-9089 Check messages for Leave a message
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#### **DARRON YOUNG**More Info about DARRON YOUNG

808 MERRIMAC DR Map It Recorded: 06/01/2005 Check White Page Listings Check Yellow Pages
FITZGERALD, GA 31750 (229) 424-9089 Check messages for Leave a message
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#### **DARRON YOUNG**More Info about DARRON YOUNG

244 KY HWY 550 Map It Recorded: 06/01/2005 Check White Page Listings Check Yellow Pages
HAZARD, KY 41701 (606) 378-2314 Check messages for Leave a message
Google Darron Young DARRON YOUNG Background Check

#### **DARRON YOUNG**More Info about DARRON YOUNG

100 ROWAN CIR Map It Recorded: 01/14/2001 Check White Page Listings Check Yellow Pages

MONROE, LA 71202 (318) 323-4252 Check messages for Leave a message

Google Darron Young DARRON YOUNG Background Check

#### DARRON YOUNG Born Feb 1970 More Info about DARRON YOUNG

1115 LINCOLN AVE Map It Recorded: 01/14/2001 Check White Page Listings Check Yellow Pages

CLEVELAND, MS 38732 (662) 843-4583 Check messages for Leave a message

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#### DARRON YOUNG Born Nov 1969 More Info about DARRON YOUNG

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#### DARRON YOUNG More Info about DARRON YOUNG

2477 PADEN ST Map It Recorded: 09/01/2005 Check White Page Listings Check Yellow Pages

JACKSON, MS 39204 (601) 346-5786 Check messages for Leave a message

Google Darron Young DARRON YOUNG Background Check

#### DARRON YOUNG More Info about DARRON YOUNG

597 HOUSTON AVE Map It Recorded: 04/01/2006 Check White Page Listings Check Yellow Pages

JACKSON, MS 39209 Check messages for Leave a message

Google Darron Young DARRON YOUNG Background Check

#### **DARRON YOUNG**More Info about DARRON YOUNG

611 HOUSTON AVE Map It Recorded: 02/01/2006 Check White Page Listings Check Yellow Pages

JACKSON, MS 39209 Check messages for Leave a message
Google Darron Young DARRON YOUNG Background Check

#### **DARRON YOUNG**More Info about DARRON YOUNG

323 JONES ST Map It Recorded: 02/27/2002 Check White Page Listings Check Yellow Pages CHARLOTTE, NC 28208 (704) 391-7289 Check messages for Leave a message Google Darron Young DARRON YOUNG Background Check

#### **DARRON YOUNG**More Info about DARRON YOUNG

5480 PREAKNESS LN Map It Recorded: Unknown Check White Page Listings Check Yellow Pages

DALLAS, TX 75211 Check messages for Leave a message
Google Darron Young DARRON YOUNG Background Check

#### **DARRON YOUNG**More Info about DARRON YOUNG

775 GATEWAY DR SE Map It Recorded: 11/12/1999 Check White Page Listings Check Yellow Pages

LEESBURG, VA 20175 (703) 443-0477 Check messages for Leave a message

Google Darron Young DARRON YOUNG Background Check

#### **DARRON YOUNG**More Info about DARRON YOUNG

775 GATEWAY DR SE Map It Recorded: 04/15/2001 Check White Page Listings Check Yellow Pages

LEESBURG, VA 20175 (703) 737-0284 Check messages for Leave a message

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#### DARRON A YOUNG Born 1963 More Info about DARRON A YOUNG

2477 PADEN ST Map It Recorded: 03/12/2002 Check White Page Listings Check Yellow Pages

JACKSON, MS 39204 (601) 373-0955 Check messages for Leave a message

Google Darron A Young DARRON A YOUNG Background Check

#### DARRON A YOUNG Born Jul 1963 More Info about DARRON A YOUNG

708 WESTMONT DR Map It Recorded: 04/15/2001 Check White Page Listings Check Yellow Pages

JACKSON, MS 39209 Check messages for Leave a message

Google Darron A Young DARRON A YOUNG Background Check

#### DARRON D YOUNG Born Jun 1981 More Info about DARRON D YOUNG

1100 7TH ST Map It Recorded: 03/12/2002 Check White Page Listings Check Yellow Pages

MONROE, LA 71202 (318) 325-7564 Check messages for Leave a message

#### DARRON D YOUNG Born 1969 More Info about DARRON D YOUNG

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#### DARRON D YOUNG Born 1969 More Info about DARRON D YOUNG

6238 GOODEN LAKE RD Map It Recorded: 04/01/2006 Check White Page Listings Check Yellow Pages

BELZONI, MS 39038 Check messages for Leave a message

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DARRON D YOUNG Born 1969 More Info about DARRON D YOUNG
6238 GOODEN LAKE RD Map It Recorded: Unknown Check White Page Listings Check Yellow Pages
BELZONI, MS 39038 (662) 247-0458 Check messages for Leave a message
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#### DARRON D YOUNG Born 1969 More Info about DARRON D YOUNG

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DARRON D YOUNG

Born Dec 1967 More Info about DARRON D YOUNG

2103 BEAVER BEND RD Map It Recorded: 10/06/2004 Check White Page Listings Check Yellow Pages

HOUSTON, TX 77088 (281) 405-0424 Check messages for Leave a message

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DARRON D YOUNG

Born Dec 1967 More Info about DARRON D YOUNG

2103 BEAVER BEND RD Map It Recorded: Unknown Check White Page Listings Check Yellow Pages

HOUSTON, TX 77088 (281) 448-5166 Check messages for Leave a message

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DARRON K YOUNG Born 1974 More Info about DARRON K YOUNG

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Google Darron K Young DARRON K YOUNG Background Check

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SOUTH PASADENA, CA 91030 Check messages for Leave a message

Google Darron K Young DARRON K YOUNG Background Check

DARRON L YOUNG

Born Mar 1956 More Info about DARRON L YOUNG

101 GRESHAM ST Map It Recorded: 01/28/2002 Check White Page Listings Check Yellow Pages

BAYTOWN, TX 77520 Check messages for Leave a message

Google Darron L Young DARRON L YOUNG Background Check

DARRON L YOUNG Born May 1979 More Info about DARRON L YOUNG

101 GRESHAM ST Map It Recorded: 03/01/2002 Check White Page Listings Check Yellow Pages

BAYTOWN, TX 77520 Check messages for Leave a message
Google Darron L Young DARRON L YOUNG Background Check

DARRON L YOUNG Born May 1979 More Info about DARRON L YOUNG

406 HUMBLE ST Map It Recorded: Unknown Check White Page Listings Check Yellow Pages

BAYTOWN, TX 77520 (281) 427-6804 Check messages for Leave a message

Google Darron L Young DARRON L YOUNG Background Check

DARRON L YOUNG Born 1969 More Info about DARRON L YOUNG

43044 SHERBROOKE TER Map It Recorded: 05/26/2003 Check White Page Listings Check Yellow Pages

LEESBURG, VA 20176 Check messages for Leave a message

Google Darron L Young DARRON L YOUNG Background Check

DARRON L YOUNG More Info about DARRON L YOUNG

17989 TRANQUILITY RD Map It Recorded: 04/01/2006 Check White Page Listings Check Yellow Pages

PURCELLVILLE, VA 20132 Check messages for Leave a message

Google Darron L Young DARRON L YOUNG Background Check

DARRON L YOUNG

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508 ROSEMARY LN Map It Recorded: Unknown Check White Page Listings Check Yellow Pages

PURCELLVILLE, VA 20132 Check messages for Leave a message

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DARRON L YOUNG

More Info about DARRON L YOUNG

508 ROSEMARY LN Map It Recorded: 05/01/2006 Check White Page Listings Check Yellow Pages

PURCELLVILLE, VA 20132 (540) 338-7487 Check messages for Leave a message

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DARRON L YOUNG Born 1969 More Info about DARRON L YOUNG

143 BELL HAVEN CIR Map It Recorded: 10/15/2003 Check White Page Listings Check Yellow Pages

STEPHENS CITY, VA 22655 Check messages for Leave a message

Google Darron L Young DARRON L YOUNG Background Check

**DARRON S YOUNG**More Info about DARRON S YOUNG

4606 CEDAR SPRINGS RD Map It Recorded: 05/17/2001 Check White Page Listings Check Yellow Pages

DALLAS, TX 75219 (214) 528-3123 Check messages for Leave a message

Google Darron S Young DARRON S YOUNG Background Check

DARRON S YOUNG

More Info about DARRON S YOUNG

1108 MANASSAS DR Map It Recorded: Unknown Check White Page Listings Check Yellow Pages

FORNEY, TX 75126 (469) 762-5165 Check messages for Leave a message

Google Darron S Young DARRON S YOUNG Background Check

DARRON S YOUNG Born Sep 1959 More Info about DARRON S YOUNG

1732 CATHEDRAL DR Map It Recorded: 03/01/2002 Check White Page Listings Check Yellow Pages

PLANO, TX 75023 (972) 578-9768 Check messages for Leave a message

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DARRON S YOUNG
Born Sep 1959 More Info about DARRON S YOUNG
7701 MAULLN Map It Recorded: 05/07/2004 Check White Page Listings Check Yellow Pages
ROWLETT, TX 75089 (972) 412-4447 Check messages for Leave a message
Google Darron S Young DARRON S YOUNG Background Check

DARRON S YOUNG

Born Sep 1959 More Info about DARRON S YOUNG

7701 MAUI LN Map It Recorded: 05/08/2002 Check White Page Listings Check Yellow Pages

ROWLETT, TX 75089 (972) 412-4448 Check messages for Leave a message

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DARRON T YOUNG
Born Aug 1965 More Info about DARRON T YOUNG
619 MCKINLEY AVE Map It Recorded: 01/25/2002 Check White Page Listings Check Yellow Pages
SAINT LOUIS, MO 63122 (314) 966-2865 Check messages for Leave a message
Google Darron T Young DARRON T YOUNG Background Check

Can't find DARRON K. YOUNG?
TRY THIS DATABASE
Background Check on DARRON K. YOUNG
www.PeopleLookUp.com 20 Year History

**Premium Listing** 

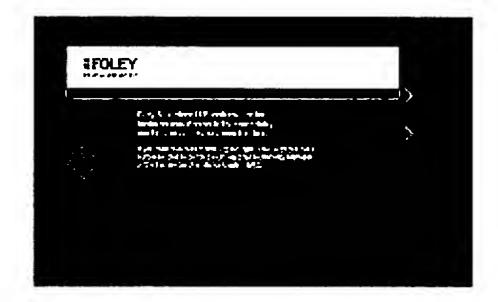
Premium Listing

Search by Phone Number Search by Social Security Number Complete Backgro

Search Any Full Name: Darron K. Young

All Sta

#### ZABASEARCH being described as "Google on steroids." -CBS 4 W

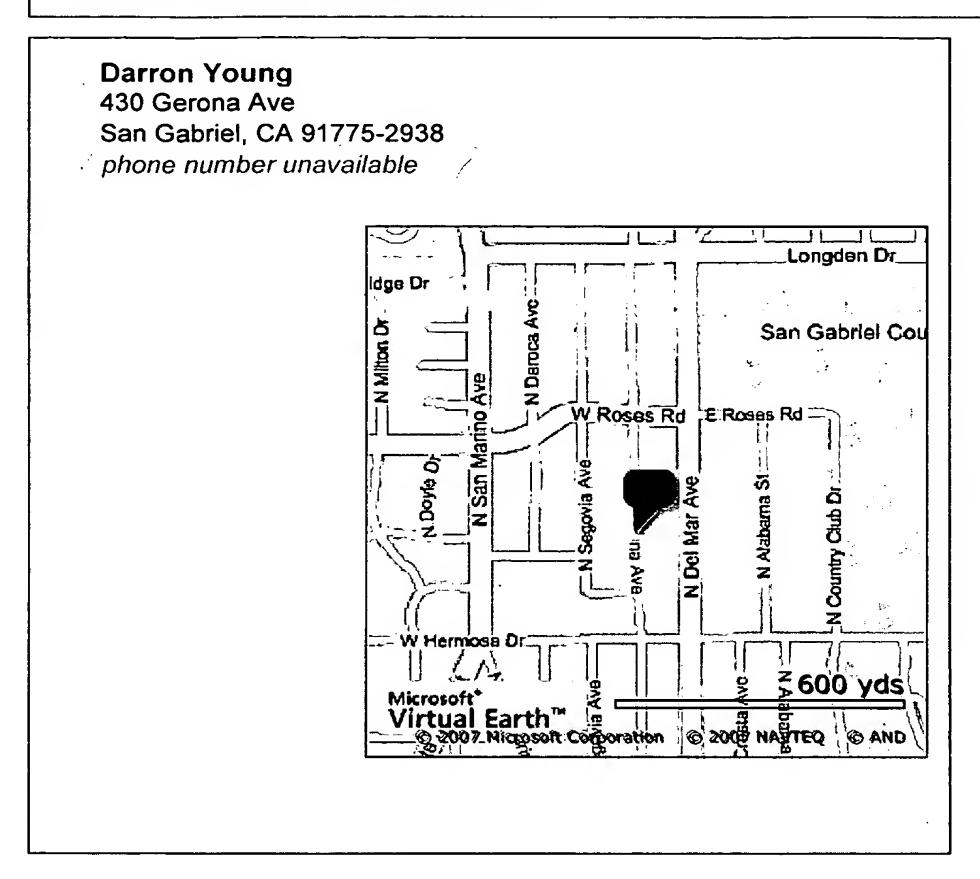


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#### 1 Result matching "Darron Young, CA"



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Web	<u>Images</u>	Maps	News	Shopping	<u>Gmail</u>	more •				Sign in
Goog	g <u>le</u>		Da	rron K. You	ng			Search	Advanced Search Preferences	
Web					Res	sults 1 - 10	of about <b>5,47</b> (	) for Darro	n K. Young. (0.27	seconds)

(WO/2005/081929) DETECTION OF RESONATOR MOTION USING ...

YOUNG, Darron, K. [US/US]; c/o California Institute of Technology, 1200 E. California Blvd., MS 201-85, Pasadena, CA 91125 (US) (US Only). ... www.wipo.org/pctdb/en/wo.jsp?wo=2005081929 - 16k - Cached - Similar pages

Young, D.P. - Z25.011 Young, Darron K. - A26.001 Young, David P. - A11.015, P4.001 Young, H. Daniel - B30.014 Young, J.E. - G33.012 Young, Peter - V7.001 ... flux.aps.org/meetings/YR00/MAR00/auiY.html - 18k - Cached - Similar pages

Anisotropic Electrical Spin Injection in Ferromagnetic ...

Darron K. Young, E. Johnston-Halperin, D. D. Awschalom (Center for Spintronics and Quantum Computation, University of California, Santa Barbara, CA 93106), ...

flux.aps.org/meetings/YR02/MAR02/baps/abs/S590009.html - 3k - Cached - Similar pages

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Darron Young Patent Inventor San Gabriel, CA, US
Browse Inventors: A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P ... Also you can save patents and inventions by Darron Young using our FREE ...
www.freshpatents.com/Darron-K-Young-SanGabriel-invdiry.php - 9k Cached - Similar pages

#### LinkedIn: Darron Isobe

LinkedIn is a networking tool that helps users like **Darron** Isobe discover inside connections ... Manager - Audio/visual Services at Brigham **Young** University ... www.linkedin.com/pub/3/130/128 - 18k - <u>Cached</u> - <u>Similar pages</u>

Ancestry and Genealogy Search

YOUNG, DARRON L, Born 1956, ,, ,, ,, DARRON L YOUNG. "Born 1957, ,, ,, , " ... YOUNG, DARSHEILA K, Born 1961, ,, ,, ,, DARSHEILA K YOUNG ... www.kindredkonnections.com/younggenealogy/YOUNG-515.html - 75k - Cached - Similar pages

#### Darron Cox Baseball Stats by Baseball Almanac

**Darron** Cox baseball stats with batting stats, pitching stats and fielding stats, ... Team, SB, CS, SB%, PH, PR, DH, AB/HR, AB/K, AB/RBI, K/BB, K/9, BB/9 ... www.baseball-almanac.com/players/player.php?p=coxda02 - 32k - <u>Cached</u> - <u>Similar pages</u>

<u>Turn 5 at Laguna Seca: Photo by Photographer Darron Spohn - photo.net</u>
Justin De **Young**, April 07, 2001; 11:29 P.M. Excellent shot! **Darron** you captured ... As for the comment about having \$5k worth of equiptment is enough to ... photo.net/photodb/photo.tcl?photo\_id=193654 - 104k - <u>Cached</u> - <u>Similar pages</u>

Mormanity: Darron Smith of <I>Black and Mormon</i>
The Church needs more men like Darron Smith as leaders, to make things right, for once and for all. Anon. At 8:41 AM, March 10, 2006, Anonymous Richard K ...
mormanity.blogspot.com/2006/03/darron-smith-of-black-and-mormon-fame.html - 43k - Cached - Similar pages

MySpace.com - Darron "sumpfnugget" III Snr - 37 - Male - Dank O ... MySpace profile for Darron "sumpfnugget" III Snr with pictures, videos, ... I was rather mocked by the young lads for ordering that from Bertus! ... profile.myspace.com/index.cfm?fuseaction=user.viewprofile&friendID=175337515 - 82k - Cached - Similar pages

1 2 3 4 5 6 7 8 9 10	<u>Next</u>
Darron K. Young	Search
Search within results   Language Tools   Search Tips   Dissatisfie	d? Help us improve   Try Google Experimental

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**EXHIBIT D** 



Previous abstract | Graphical version | Text version | Next abstract

Session A26 - Magnetic Nanostructures and Heterostructures I: Ferromagnetic Semiconductors. MIXED session, Monday morning, March 20 211A, MCC

### [A26.001] <u>Electrical Spin Injection in a Ferromagnetic</u> <u>Semiconductor Heterostructure</u>

Darron K. Young (Center for Spintronics and Quantum Computation, Quantum Institute, University of California, Santa Barbara, CA 93106)

As an alternative to electronic charge, the classical manipulation of electronic spin in semiconductor devices - "spintronics" - is attracting interest due to the possibilities of reading and writing nonvolatile information through magnetism. Electrical spin injection is observed in zero magnetic field from a ferromagnetic semiconductor into a nonmagnetic semiconductor through the fabrication of lightemitting spintronic devices using III-V heterostructures based on GaAs(Y. Ohno, D.K. Young, B. Beschoten, F. Matsukura, H. Ohno, and D.D. Awschalom, Nature, in press (1999).). Under forward bias, spin polarized holes from a p-type ferromagnetic semiconductor (Ga,Mn)As(B. Beschoten, P.A. Crowell, I. Malajovich, D.D. Awschalom, F. Matsukura, A. Shen, and H. Ohno, Phys. Rev. Lett, 83, 3073-3076 (1999).) and unpolarized electrons from an n-type GaAs substrate are injected into an embedded (In,Ga)As quantum well (QW) separated from the ferromagnetic region by a spacer layer. The hole spin polarization in the QW is directly measured by analyzing the polarization of the emitted electroluminescence (EL). The EL polarization as a function of magnetic field exhibits hysteresis below the ferromagnetic transition temperature of (Ga,Mn)As, with sharp switching fields of H\sim 40 Oe. Despite possible depolarization due to transport through interfaces, as well as valence band mixing in the bulk and QW regions, the EL polarization reveals that the hole spin polarization in the (Ga,Mn)As can be transported across interfaces over distances greater than 200 nm.

#### • Part A of program listing

#### **EXHIBIT E**



Art Gossard	gossard@engineering.ucsb.edu	Quantum Structure Growth, Science and Technology; High Performance Graded Quantum Structures; Quantum Wire and Quantum Dot Growth and Devices; MBE Technology for Ultrafast, Ultra-high-density Optoelectronic Devices; Smart Optoelectronic Pixel Technology; Cryogenic Lasers for Low-Temperature Electronics; Advanced Infrared Detectors Based on Strained Layer Superlattices.
Beth Gwinn	bgwinn@physicsucsb.edu	Quantum Hall effect in semiconductor multilayers, Josephson effects in quantum-well-coupled superconductors, and ferromagnetism in semiconductors.
Evelyn Hu	hu@ece.ucsb.edu	Low-damage, high spatial resolution fabrication techniques for novel device structures. Approaches for achieving heterogeneous materials integration in devices.
Herb Kroemer	kroemer@ece.ucsb.edu	Bloch oscillators, superconducting- semiconducting interfaces, negative refractive index materials.
John Martinis	martinis@physics.ucsb.edu	Josephson junction quantum computing, low-loss dielectric materials for quantum computing, low noise superconducting and single-electron devices, low-temperature particle detectors.
Pierre Petroff	petroff@engineering.ucsb.edu	Crystal growth and epitaxy with emphasis on understanding the fundamental processes involved in the epitaxy of semiconductors for producing novel self assembling nanostructure.
Mark Sherwin	sherwin@physics.ucsb.edu	Quantum information processing, Terahertz Dynamics in Semiconductor Nanostructures.
Jim Speck	speck@mrl.ucsb.edu	Relationship between thin film electronic materials growth, microstructure, and the relation between microstructure and physical properties.
<u>Wim van Dam</u>	vandam@cs.ucsb.edu	Quantum computing, design of efficient quantum algorithms, quantum communication complexity, adiabatic computing, nonlocality as a resource.

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